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=> attenuated (w) total (w) reflection
L1 5215 ATTENUATED (W) TOTAL (W) REFLECTION

=> solid (w) (phase or support)
L2 196708 SOLID (W) (PHASE OR SUPPORT)

=> l1 and l2
L3 57 L1 AND L2

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4 33 DUP REM L3 (24 DUPLICATES REMOVED)

=> t ti l4 1-33

L4 ANSWER 1 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
TI Assessment of ftir spectrometry for pesticide screening of aqueous samples

L4 ANSWER 2 OF 33 MEDLINE on STN DUPLICATE 1
TI Conformation, orientation, and adsorption kinetics of dermaseptin B2 onto synthetic supports at aqueous/solid interface.

L4 ANSWER 3 OF 33 MEDLINE on STN DUPLICATE 2
TI Nanoscale structure of poly(ethylene glycol) hybrid block copolymers containing amphiphilic beta-strand peptide sequences.

L4 ANSWER 4 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
TI Method and apparatus for monitoring **solid phase** chemical reactions

L4 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
TI Method for monitoring chemical processes

L4 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
TI Infrared spectroscopic studies of major cellular components. Part II: the effect of hydration on the spectra of nucleic acids

L4 ANSWER 7 OF 33 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN. DUPLICATE 4
TI Comparison of SPME/transmission IR and SPME/ATR-IR spectroscopic methods in detection of chloroanilines in aqueous solutions.

L4 ANSWER 8 OF 33 MEDLINE on STN DUPLICATE 5
TI Development of an SPME/ATR-IR chemical sensor for detection of phenol type compounds in aqueous solutions.

L4 ANSWER 9 OF 33 MEDLINE on STN DUPLICATE 6
TI Development of a **solid-phase** microextraction/reflection-absorption infrared spectroscopic method for the detection of chlorinated aromatic amines in aqueous solutions.

L4 ANSWER 10 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI Infrared chemical sensor for detection of chlorinated phenols in aqueous solutions based on a ATR waveguide coated with structural designed polymers

L4 ANSWER 11 OF 33 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN DUPLICATE 7

TI Development of headspace **solid-phase** microextraction/**attenuated total reflection** infrared chemical sensing method for the determination of volatile organic compounds in aqueous solutions.

L4 ANSWER 12 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI Dual analysis probe

L4 ANSWER 13 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 8

TI IR chemical sensor for detection of chlorinated anilines in aqueous solutions based on ATR waveguides coated with derivatized polystyrene

L4 ANSWER 14 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI IR chemical sensor for detection of aromatic compounds in aqueous solutions using alkylated polystyrene-coated ATR waveguides

L4 ANSWER 15 OF 33 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

TI Formation of domains of cationic or anionic lipids in binary lipid mixtures increases the electrostatic coupling strength of water-soluble proteins to supported bilayers.

L4 ANSWER 16 OF 33 MEDLINE on STN DUPLICATE 9

TI Effect of cationic lipids in the formation of asymmetries in supported bilayers.

L4 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI FT-infrared spectroscopy and IR-microscopy on-bead analysis of **solid-phase** synthesis

L4 ANSWER 18 OF 33 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN DUPLICATE 10

TI Monitoring **solid phase** synthesis by infrared spectroscopic techniques.

L4 ANSWER 19 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI A Comparison of Various FTIR and FT Raman Methods: Applications in the Reaction Optimization Stage of Combinatorial Chemistry

L4 ANSWER 20 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI **Attenuated Total Reflection** Fourier Transform Infrared Spectroscopic Characterization of Fluid Lipid Bilayers Tethered to Solid Supports

L4 ANSWER 21 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI Extractive sampling methods to improve the sensitivity of FTIR spectroscopy in analysis of aqueous liquids

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TI Combined light microscopy and **attenuated total reflection** fourier transform infrared spectroscopy for integration of biofilm structure, distribution, and chemistry at solid-liquid interfaces.

L4 ANSWER 23 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI New technique for ATR/FT-IR spectra measurements of adsorbed layers on a **solid-phase**/liquid boundary

L4 ANSWER 24 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI Effect of SiO₂ surface treatment on the **solid-phase** crystallization of amorphous silicon films

L4 ANSWER 25 OF 33 MEDLINE on STN DUPLICATE 11

TI Time-resolved infrared ATR measurements of liposome transport kinetics in human keratinocyte cultures and skin reveals a dependence on liposome size and phase state.

L4 ANSWER 26 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI Lipid Transfer between Small Unilamellar Vesicles and Single Bilayers on a **Solid Support**: Self-Assembly of Supported Bilayers with Asymmetric Lipid Distribution

L4 ANSWER 27 OF 33 MEDLINE on STN DUPLICATE 12

TI Interaction of myelin basic protein with single bilayers on a **solid support**: an NMR, DSC and polarized infrared ATR study.

L4 ANSWER 28 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI Phase transition behavior of single phosphatidylcholine bilayers on a solid spherical support studied by DSC, NMR and FT-IR

L4 ANSWER 29 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI Anomalies of sorption-desorption processes in polymer films adjacent to a solid

L4 ANSWER 30 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI Investigation of liquid penetration through **solid phase** by **attenuated total reflection** spectroscopy (ATR)

L4 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI Study of the penetration by liquid of a **solid phase** by attenuated internal total reflection spectroscopy

L4 ANSWER 32 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI Multipurpose sample cell for conventional and **attenuated total reflection** absorption spectroscopy of gaseous and solid samples

L4 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

TI Chemistry at organic interfaces

=> d ibib abs l4 3,4,5,7,13,17,18,19,20,33

L4 ANSWER 3 OF 33 MEDLINE on STN DUPLICATE 2

ACCESSION NUMBER: 2003327637 MEDLINE

DOCUMENT NUMBER: PubMed ID: 12857065

TITLE: Nanoscale structure of poly(ethylene glycol) hybrid block copolymers containing amphiphilic beta-strand peptide sequences.

AUTHOR: Rosler Annette; Klok Harm-Anton; Hamley Ian W; Castelletto Valeria; Mykhaylyk Oleksandr O

CORPORATE SOURCE: Max Planck Institute for Polymer Research, Ackermannweg 10, 55128 Mainz, Germany.

SOURCE: Biomacromolecules, (2003 Jul-Aug) 4 (4) 859-63.
Journal code: 100892849. ISSN: 1525-7797.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200408
ENTRY DATE: Entered STN: 20030715
Last Updated on STN: 20031218
Entered Medline: 20040830

AB This paper discusses the solid state and melt nanoscale structure of a series of novel poly(ethylene glycol) (PEG) hybrid di- and triblock copolymers, which contain amphiphilic beta-strand peptide sequences. The block copolymers have been prepared via **solid-phase** synthesis, affording perfectly monodisperse peptide segments with a precisely defined alpha-amino acid sequence. **Attenuated total reflection** Fourier transform infrared spectroscopy and X-ray scattering experiments indicate that the self-assembly properties of the peptide sequences are retained upon conjugation to PEG and mediate the formation of an ordered superstructure consisting of alternating PEG layers and peptide domains with an highly organized antiparallel beta-sheet structure. The results suggest that combination of biological structural motifs with synthetic polymers may be a versatile strategy for the development of novel self-assembled materials with complex internal structures and the potential to interface with biology.

L4 ANSWER 4 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 3
ACCESSION NUMBER: 2001:300961 CAPLUS
DOCUMENT NUMBER: 134:297921
TITLE: Method and apparatus for monitoring **solid phase** chemical reactions
INVENTOR(S): Anderson, Joanne Elizabeth; Tarczynski, Frank Joseph; Walker, Dwight Sherod
PATENT ASSIGNEE(S): Glaxo Group Limited, UK
SOURCE: PCT Int. Appl., 35 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001029537	A2	20010426	WO 2000-US28218	20001012
WO 2001029537	A3	20011129		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1221037	A2	20020710	EP 2000-970831	20001012
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL			
JP 2003512615	T2	20030402	JP 2001-532079	20001012
PRIORITY APPLN. INFO.:			US 1999-159673P	P 19991015
			WO 2000-US28218	W 20001012

AB A method for monitoring a **solid phase** chemical reaction comprises the steps of: (a) providing a reaction mixture comprising a **solid support** and a reaction medium, (b) contacting an **attenuated total reflection** element to said

reaction mixture; and then (c) monitoring the chemical reaction on the **solid support** through the **attenuated total reflection** element. The monitoring step is carried out by **attenuated total reflection** spectroscopy. An advantage of the invention is that the chemical reaction on the **solid support** may be directly monitored, rather than indirectly monitoring that chemical reaction by monitoring reaction constituents in the reaction medium.

L4 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2001:907179 CAPLUS
DOCUMENT NUMBER: 136:14892
TITLE: Method for monitoring chemical processes
INVENTOR(S): Hurwood, Tracey Victoria; Wiffen, Jonathan William;
Grieve, Bruce Donaldson; Wellings, Donald Alfred;
Wells, Ian
PATENT ASSIGNEE(S): Avecia Limited, UK
SOURCE: Brit. UK Pat. Appl., 19 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2358921	A1	20010808	GB 2000-25508	20001018
PRIORITY APPLN. INFO.:			GB 1999-24640	A 19991019

AB A method for monitoring reactions or chemical processes, such as **solid phase** synthesis, comprises detecting chromophoric changes using attenuated total reflectance spectroscopy (ATR) techniques, preferably in the UV/ visible wave band, e.g. 150 to 550 nm. The spectral data is collected and analyzed using multivariant data manipulation processes such as principal component anal. The collection and anal. may be performed in real time.

L4 ANSWER 7 OF 33 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN DUPLICATE 4

ACCESSION NUMBER: 2002:593210 BIOSIS
DOCUMENT NUMBER: PREV200200593210
TITLE: Comparison of SPME/transmission IR and SPME/ATR-IR spectroscopic methods in detection of chloroanilines in aqueous solutions.
AUTHOR(S): Yang, Jyisy [Reprint author]; Tsai, Fang-Pei
CORPORATE SOURCE: Department of Chemistry, Chung-Yuan Christian University, Chung-Li, 320, Taiwan
SOURCE: Applied Spectroscopy, (July, 2001) Vol. 55, No. 7, pp. 919-926. print.
CODEN: APSPA4. ISSN: 0003-7028.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 20 Nov 2002
Last Updated on STN: 20 Nov 2002

AB Infrared (IR) optical sensors provide fast and nondestructive methods for the detection of organic compounds in aqueous solutions. Among the existing IR methods, **attenuated total reflection** (ATR) combined with the **solid-phase** micro-extraction (SPME) principle is the most frequently used method in the detection of organic compounds in aqueous solutions. In an effort to simplify this method for aqueous solution analysis, the SPME/transmission absorption infrared (TA-IR) method was developed in this work, and its performance was compared with that of the ATR-IR method. Results

indicated that the SPME/TA-IR method provided better linearity (0 to 200 ppm concentration range) and sensitivity than the SPME/ATR-IR method in detection of chloroanilines. The lower linearity in the SPME/ATR-IR method was most likely caused by the change in the refractive index of the SPME phase after the absorption of different amounts of analytes. Because of the high-energy throughput in the SPME/TA-IR method, which largely reduced the noise level in the spectra, this method can provide slightly lower detection limits than the SPME/ATR-IR method. Another advantage of this new method is that the influence on IR signals by the SPME phase thickness phase can be partially compensated.

L4 ANSWER 13 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN DUPLICATE 8
ACCESSION NUMBER: 2000:611495 CAPLUS
DOCUMENT NUMBER: 133:246618
TITLE: IR chemical sensor for detection of chlorinated
anilines in aqueous solutions based on ATR waveguides
coated with derivatized polystyrene
AUTHOR(S): Yang, Jyisy; Lin, Hung-Che
CORPORATE SOURCE: Dep. Chem., Chung-Yuan Christian University, Chung-Li,
320, Taiwan
SOURCE: Analyst (Cambridge, United Kingdom) (2000), 125(9),
1605-1610
CODEN: ANALAO; ISSN: 0003-2654
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A method based on the combination of **solid phase** micro-extraction (SPME) and IR **attenuated total reflection** (ATR) spectrometry was used to determine chlorinated anilines in aqueous solns. To overcome the limitations of com. available polymers, polystyrene (PS) was derivatized with alkanes and alcs. of different chain lengths to increase the performance of SPME-IR/ATR in the detection of chlorinated anilines in aqueous solns. The derivatized PS provides a higher extraction efficiency and rate of diffusion in the determination of aromatic compds. than the polymers commonly used in SPME-IR/ATR methods. The increase in extraction efficiency is mainly caused by the π - π interaction between the Ph rings of PS and the aromatic compds. The high rate of diffusion of analytes in the SPME phase was due to the lowering of compactness after derivatization. Based on the signal-to-noise ratio in the detected spectra, the detection limits using derivatized PS were around the ppm level for the chloroanilines examined. The effects of salt and pH on the detection of chloroanilines were also examined. The IR signals were increased around 3-fold after the addition of 20% NaCl to the solns. The effect of pH was small if the pH of the solution was kept >6.

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:370777 CAPLUS
DOCUMENT NUMBER: 135:293766
TITLE: FT-infrared spectroscopy and IR-microscopy on-bead
analysis of **solid-phase** synthesis
AUTHOR(S): Bandel, Holger; Haap, Wolfgang; Jung, Gunther
CORPORATE SOURCE: Germany
SOURCE: Combinatorial Chemistry (1999), 479-498. Editor(s):
Jung, Guenther. Wiley-VCH Verlag GmbH: Weinheim,
Germany.
CODEN: 69BIF3
DOCUMENT TYPE: Conference; General Review
LANGUAGE: English

AB A review, with 40 refs., on Fourier transform IR (FT-IR) spectroscopy, as

an effective method in **solid-phase** organic synthesis for reaction monitoring. Several anal. methods using FT-IR spectroscopy are presented, including potassium bromide pellet method and **attenuated total reflection** spectroscopy.

Topics covered include single bead reaction monitoring and examination of the interaction between resin-bound reactive groups via IR microscopy.

REFERENCE COUNT: 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 18 OF 33 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on
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ACCESSION NUMBER: 1999:449566 BIOSIS
DOCUMENT NUMBER: PREV199900449566
TITLE: Monitoring **solid phase** synthesis by
infrared spectroscopic techniques.
AUTHOR(S): Huber, Walter [Reprint author]; Bubendorf, Andre; Grieder,
Alfred; Obrecht, Daniel
CORPORATE SOURCE: F. Hoffmann-La Roche, PRPI 65/201, CH-4070, Basel,
Switzerland
SOURCE: Analytica Chimica Acta, (June 30, 1999) Vol. 393, No. 1-3,
pp. 213-221. print.
CODEN: ACACAM. ISSN: 0003-2670.
DOCUMENT TYPE: Article
LANGUAGE: English
ENTRY DATE: Entered STN: 26 Oct 1999
Last Updated on STN: 26 Oct 1999

AB The paper describes the use of **attenuated total reflection** fourier transform-infrared (ATR FT-IR) microspectroscopic techniques for the verification of the structure of chemical compounds synthesised on polystyrene beads in combinatorial chemistry. A six step reaction sequence is characterised completely by infrared (IR) spectroscopic investigations of single beads. Incomplete reactions or the occurrence of side products are clearly indicated. Quantitative information can be extracted with high precision using absorption bands of the polymer matrix as internal standard. Compared to other IR techniques, the ATR micro IR technique shows clear advantages with respect to sensitivity and resolution. The technique has the potential to be used for the characterisation of single beads in split and combined synthesis techniques.

L4 ANSWER 19 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:756356 CAPLUS
DOCUMENT NUMBER: 130:66042
TITLE: A Comparison of Various FTIR and FT Raman Methods:
Applications in the Reaction Optimization Stage of
Combinatorial Chemistry
AUTHOR(S): Yan, Bing; Gremlich, Hans-Ulrich; Moss, Serge;
Coppola, Gary M.; Sun, Qun; Liu, Lina
CORPORATE SOURCE: Novartis Pharmaceuticals Corporation, Summit, NJ,
07901, USA
SOURCE: Journal of Combinatorial Chemistry (1999), 1(1), 46-54
CODEN: JCCHFF; ISSN: 1520-4766
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Four different FTIR methods, i.e., single-bead FTIR, beam condenser, macro **attenuated total reflection** (macro-ATR), and KBr pellet methods, and macro and single-bead FT Raman methods have been investigated, and the relative utility was compared for the anal. of resin-bound organic compds. and the monitoring of **solid-phase** organic reactions. Furthermore, the comparison includes two addnl. methods from the literature: diffuse reflectance IR Fourier

transform spectroscopy and photoacoustic spectroscopy. While all of these methods have some utility for **solid-phase** sample anal., the relative merits of these methods vary particularly in such areas as the information content, spectral quality, sensitivity, speed, sample requirement, and the instrument cost. Both single-bead FTIR and beam condenser FTIR methods have been found to be superb methods in each of these aspects. In the following way, these methods meet many of the essential requirements for a TLC equivalent for **solid-phase** synthesis: only a single bead or 50-100 beads are needed for anal. so that reaction is not interrupted and is monitored in real-time; a high-quality spectrum can be recorded within a few minutes; no sample preparation is required, making the anal. time even shorter than that for TLC anal.; these two FTIR methods provide qual., quant. (the percentage of conversion), and kinetics information on organic reactions carried out on resin supports. Finally, from the synthetic chemist's point of view, the addnl. advantages of the beam condenser method, such as the low cost and the ease of operation, make it a more suitable choice as a TLC equivalent for **solid-phase** organic synthesis applications.

REFERENCE COUNT: 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:66639 CAPLUS

DOCUMENT NUMBER: 128:133869

TITLE: **Attenuated Total**

Reflection Fourier Transform Infrared

Spectroscopic Characterization of Fluid Lipid Bilayers Tethered to Solid Supports

AUTHOR(S): Cheng, Yaling; Boden, Neville; Bushby, Richard J.; Clarkson, Steve; Evans, Stephen D.; Knowles, Peter F.; Marsh, Andrew; Mills, Bob

CORPORATE SOURCE: Centre for Self-Organising Molecular System, University of Leeds, Leeds, LS2 9JT, UK

SOURCE: Langmuir (1998), 14(4), 839-844

CODEN: LANGD5; ISSN: 0743-7463

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB **Attenuated total reflection** FTIR

spectroscopy was developed to monitor the tethering of phospholipid bilayers to Au-coated, ZnSe crystals. Bilayer attachment was accomplished by fusing lipid vesicles onto a self-assembled monolayer comprised of a mixture of 2-mercaptoethanol (EO1) and a hexaethyleneoxythiol derivative of cholesterol (EO6C). The cholesteryl moieties penetrate into the lower leaflet of the bilayer and serve to anchor the bilayer to the **solid support**. For fractional surface area coverage of EO6C < 0.24, no lipid adsorption was detected, while for higher EO6C coverages, bilayers are formed with the outer and inner leaflets comprised, resp., of pure lipid and the complementary lipid/cholesteryl mixture. From a thermodyn. anal. of this result the initial step in bilayer self-assembly onto the surface is adsorption and rupture of a single lipid vesicle. The frequencies of the lipid CH₂ stretching vibrations are characteristic of a fluid liquid-crystalline bilayer.

REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1969:42434 CAPLUS

DOCUMENT NUMBER: 70:42434

TITLE: Chemistry at organic interfaces

AUTHOR(S): Bertolucci, Michael; Jantzeff, Fern; Chamberlain, David L., Jr.

CORPORATE SOURCE: Stanford Res. Inst., Menlo Park, CA, USA
SOURCE: Advances in Chemistry Series (1968), No. 87, 124-32
CODEN: ADCSAJ; ISSN: 0065-2393
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The single reflection **attenuated total reflection** in spectra of a series of synthetic and natural Ca phosphates were examined for changes resulting from adsorption of organic mols. The asym. P-O stretching frequency (ν_3) at 1027 cm.⁻¹ underwent a high frequency shift of up to 9 cm.⁻¹ as a result of adsorption of citric acid, tetracycline, and certain other polar mols. Similarly, the P-O stretching frequency of the P-O-C group in trialkyl phosphates was shifted to higher frequencies by H bonding with water and phenol. The relation between the high frequency shift and the properties of the **solid phase** is discussed. A tentative explanation is offered for the shift in the lattice absorption frequency as a result of surface modification.

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